

# **Emergency Plan**

**for**

**Materials Science Division**

**and**

**Division of Educational Programs**

## **Building 223**

**Deon Ettinger AES**


**Revised 12-2006**

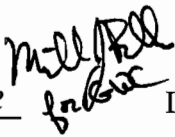
**Emergency Plan**

**for**

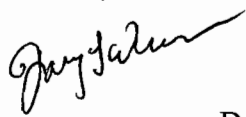
**Building 223**

Date Revised: December 2006

Approved: Deon Ettinger  Date: 1/17/07  
Area Emergency Supervisor

Approved: George Crabtree  Date: 1/17/07  
MSD Director

Approved: Harold Myron  Date: 1/17/2007  
DEP Director

Approved: Gary Winner  Date: 1/21/07  
Emergency Management Officer

## 1. Purpose

This emergency plan for Building 223 has been prepared to:

- 1) To meet the requirements of EPIP 1.4, Building Emergency Plans  
[http://www.anl.gov/ESH/sub\\_pages/emergency\\_management/epip/epip1-4\\_r1\\_011705.pdf](http://www.anl.gov/ESH/sub_pages/emergency_management/epip/epip1-4_r1_011705.pdf)
2. Provide building occupants with information about the building that they need to know during an emergency.
3. Document that emergency preparedness in the building has been considered and is reviewed annually.
4. Provide the Fire Department and other emergency responders with information about the building. Information from the plan is maintained in Emergency Services Pre-plan (ESP) database.

Site-wide emergency management is described in the Comprehensive Emergency Management Plan (CEMP), available from SCD-Emergency Management. All emergencies at ANL are managed under the incident command system, regardless of the nature of the emergency or where it occurs. The Fire Department incident commander is in charge of the emergency response.

## 2. Scope

This plan contains emergency response information specific to this building. The emergency personnel listed in this plan will assist the incident commander as needed when there is an emergency in the building.

## 3. Responsibilities

**3.1 The Division Director** has responsibility for:

1. Assuring that building-specific emergency plans are prepared and approving those plans for all buildings where division personnel reside.
2. Assuring that drills are performed to test the effectiveness of the emergency plan.

**3.2 The Area Emergency Supervisor** has responsibility for:

1. Meeting the responsibilities/duties of the AES in EPIP 2.2.1, Area Emergency Supervisors [http://www.anl.gov/ESH/sub\\_pages/emergency\\_management/epip/epip2-2-1\\_r2\\_011705.pdf](http://www.anl.gov/ESH/sub_pages/emergency_management/epip/epip2-2-1_r2_011705.pdf)
2. Writing, reviewing and updating the building emergency plan in accordance with this procedure.
3. Assuring, where appropriate, that the criteria for classification of Emergency Action Levels (EALs) and events emanating from a building or operation are properly documented and transmitted to the Emergency Management Officer for incorporation in

EPIP 2.7, Emergency Action Levels.

4. Assuring improvements are made in the emergency planning process, if necessary, from lessons learned during the drills.
5. Assuring that building occupants are trained regarding their role in the emergency plan. Building occupants and building monitors will be trained through participation in the annual sheltering and evacuation drills.
6. Planning and conducting sheltering and evacuation drills on an annual basis.
7. Acting as the point of contact for building emergency planning information and issues related to building hazards and building occupants.

### **3.3 The ANL Emergency Management Officer has responsibility for:**

1. Providing direction, guidance and oversight in the development of building emergency plans.
2. Providing guidance and oversight in the testing of building emergency plans sheltering and evacuation processes.

### **3.4 Watches and Warnings**

Please review the requirements of EPIP 3.8.2 Watches and Warnings

[http://www.anl.gov/ESH/sub\\_pages/emergency\\_management/pdf/epip3-8-2\\_051404.pdf](http://www.anl.gov/ESH/sub_pages/emergency_management/pdf/epip3-8-2_051404.pdf)

### **3.5 Protective Actions**

During an operational emergency, 223 occupants will meet the requirements of EPIP 3.9 Protective Action Implementation, found at:

[http://www.anl.gov/ESH/sub\\_pages/emergency\\_management/pdf/epip3-9\\_071202.pdf](http://www.anl.gov/ESH/sub_pages/emergency_management/pdf/epip3-9_071202.pdf)

### **3.6 Off-site Fire Department Assistance**

**Occasionally, off site Fire Departments will provide mutual aid to the Laboratory. When the ANL Fire Department is already responding to another incident, the ANL Fire Department will attempt to send one person to the scene to act as an escort for the responding fire department. If this escort is not available, the AES staff will need to provide guidance and support to the responding fire department personnel. As with the ANL Fire Department, the senior fire officer functions as Incident Commander and AES personnel need to take direction from him/her.**

### **4.0 Actions**

#### 4.1 Emergency Personnel in Building 223:

<u>Area Emergency Supervisor</u>	<u>ANL Ext</u>	<u>NEXTEL</u>	<u>Home Telephone</u>
Deon Ettinger	2-4272	630-327-6749 111*3452*457	(630) 717-9487

<u>Alt. Area Supervisor</u>	<u>ANL Ext.</u>	<u>NEXTEL</u>	<u>Home Telephone</u>
Vernon Pahnke	2-4937	630-417-8450 111*3452*168	(630) 904-0585

#### Building Monitors

<u>1st Floor</u>	<u>Assigned Areas</u>	<u>ANL Ext.</u>	<u>Home Telephone</u>
H. Claus	A-Wing	<u>2-4030</u>	<u>(312) 321-0029</u>
J. E. Pearson	B-Wing	<u>2-7738</u>	
W. K. Kwok	C-Wing	<u>2-5539</u>	<u>(630) 852-3840</u>
D. Kupperman	M-Wing	<u>2-5108</u>	<u>(708) 386-0426</u>
J. Coble	D&S-Wing	<u>2-5497</u>	<u>(815) 741-8631</u>

<u>2nd Floor</u>	<u>Assigned Areas</u>	<u>ANL Ext.</u>	<u>Home Telephone</u>
H. You	A&B-Wing	<u>2-3429</u>	<u>(630) 717-5584</u>
J. Mitchell	C-Wing	<u>2-5852</u>	<u>(630) 357-1606</u>
N. Sanchez	D&S Wings	<u>2-6525</u>	<u>(815) 886-4332</u>

#### Service Floor

D. Rosenmann	B&D Wings	<u>2-5502</u>	<u>(630) 428-2718</u>
L. Davenport	M,A&C Wings	<u>2-3386</u>	<u>(630) 739-6385</u>

<u>Other Emergency Telephone Numbers:</u>	<u>ANL Ext.</u>	<u>Pager</u>	<u>Home Telephone</u>
Bldg. 223 HP Representative G. Mosho	<u>2-6172</u>	<u>4-6172</u>	<u>(815) 791-9960</u>
Bldg. 223 Maint. Foreman M. Vondra	<u>2-5215</u>	<u>4-5215</u>	<u>(708) 924-1339</u>
Bldg. 223 Night Maintenance	<u>2-7583</u>	<u>4-1601</u>	

## 4.2 Building Description

Building 223 is steel framed with masonry walls and concrete floors. It is used for materials research and educational programs. About 150 people in office and normal laboratory areas occupy it. There is a diesel emergency generator that supplies power for emergency lighting, ventilation, building network and the elevator (load rated at 27% of capacity). This generator has fuel to supply power for 6 days with its 500-gallon fuel tank (kept at 85% capacity).

There are no building systems that require shut down or start up during an emergency unless there is a requirement to shut off the outside supplied air. This would be done by maintenance. There are currently no handicapped individuals requiring assistance.

## 4.3 Hazards Checklist

Hazard	Present
Radiation or radioactive materials	X-rays, no rad materials
Chemicals	Yes
Carcinogens	Yes (minimal)
Special Nuclear Materials	No
Flammable metals:	Yes

Also, please see Appendix A – Hazards Survey for Building 223 for more information.

## 4.4 Sheltering

- a. Sheltering is required for severe weather or when announced by the laboratory as a safety precaution
- b. Sheltering announcements can be made over the site public address system by the Argonne operator, by the external sirens, or internally by the microphones located in S238 or in corridor D002.
- c. Building drawings and escape routes can be found in Appendix B.
- d. The 'all-clear' notification will be announced over the PA system by the Argonne operator or verbally by the AES as appropriate.
- e. The control point for the AES and building monitors is in the shelter area of the basement near the elevator.
- f. The building monitors are to search their area of responsibility to ensure that all building occupants are aware of sheltering requirements. They need to report this to the AES in the shelter area.
- g. Building 223 does not contain any equipment requiring shutdown before sheltering.
- h. Occupants of building 223 need to be aware of others in the building who may have disabilities that require special consideration during sheltering. At this time, there are no such individuals.
- i. An annual sheltering drill is required.
- j. As building monitors report to the AES during sheltering, comments of unsatisfactory performance will be noted. The AES will roll-up the

comments as appropriate for improvements. This report along with documentation will be sent to EM-SCD. The drills will be the training for the building monitors.

- k. For more information please see EPIP 3.9, Protective Action Implementation.

## **4.5 Evacuation**

- a. Building 223 may require evacuation under certain circumstances. In case of a fire or due to the release of toxic chemicals or as determined as appropriate by Argonne Emergency personnel. The evacuation notice will be given by the AES over the building public address system or by the Argonne operator. During a fire, the building fire bells will be rung either by activating the pull boxes in various locations or will be automatically activate by the building sensors.
- b. Evacuation announcements can be made over the site public address system by the Argonne operator, by the external sirens, or internally by the microphones located in S238 or in corridor D002.
- c. Building drawings and escape routes can be found in Appendix B.
- d. The building monitors are to search their area of responsibility to ensure that all building occupants are aware of the evacuation requirement. They need to report this to the AES at the evacuation assembly point.
- e. The assembly area for an evacuation is the 203 main conference room. This meets the 500-foot rule for indoor sheltering.
- f. The 'all-clear' notification will be announced verbally by the AES as appropriate.
- g. There are no special equipment considerations during an evacuation.
- h. If a building occupant is unaccounted for the Incident Commander, with the assistance of the AES, will send in properly trained emergency response personnel to search for unaccounted for occupants..
- i. Occupants of building 223 need to be aware of others in the building who may have disabilities that require special consideration during evacuation. At this time, there are no such individuals.
- j. There is a requirement for an annual drill.
- l. As building monitors report to the AES during evacuation, comments of unsatisfactory performance will be noted. The AES will roll-up the comments as appropriate for improvements. This report along with documentation will be set to EM-SCD. The drills will be the training for the building monitors.
- m. For more information please see EPIP 3.9, Protective Action Implementation.
- n. As appropriate at the time of evacuation, special consideration will be made for the need to use or avoid specific exits or use specific evacuation routes to arrive at the assembly area or evacuate to an off-site location. This will be announced over the building public address system.

## Appendix A

1. Area Emergency Supervisor **Deon Ettinger**  
Alternate(s) **Vernon A. Jr. Pahnke**
2. Hazard Survey Approved by **George Crabtree** (Division Director)  
Date \_\_ (originally signed 10/02) \_\_\_\_
3. General Building use. Mark all that apply. Describe the building uses, marking as many as apply. If necessary, provide a brief discussion here or on page 5 to adequately describe building use. Examples include: Satellite Waste Accumulation Areas, Pilot Scale Projects, hazardous material storage, above and under ground storage tanks, Special Nuclear Materials, student area, computer facility, etc.  
  
☒ Office  
☐ Process  
☒ Laboratory  
☐ Construction/Demolition  
☐ Warehouse/Storage  
  
Bench scale laboratory research, normal office activity
4. No classified materials are present in the building.
5. Special Use Buildings. Does your building include any of the following? Mark all that apply.  
☐ nuclear facility  
☐ radiological facility  
☒ utility (water, steam, electrical)  
☐ TSD facility  
☒ hazardous waste  
☐ accelerator  
☒ thermal/cryogenic  
☒ pressure differential  
  
Does your building have areas that are controlled by cyber-locks, keypad access, or bar code readers? Identify locations and type of control. Are the locations marked to identify by name that can provide access in an emergency?  
  
**no**
6. Off site hazards such as hazardous materials move on the following transportation corridors. These off site hazards may impact all of ANL-E or individual buildings on the site depending on such things as weather conditions.



Interstate 55  
Lemont Avenue  
Cass Avenue  
National Gas Pipelines  
NICOR Pipeline  
Burlington Northern/Santa Fe Railroad  
I & M Canal/Illinois River

Other than hazardous materials or weather conditions, list any other off site hazards that you are aware of that may impact your building:

**None**

7. Occupant Status

Describe the occupancy of the building. First consider typical population - number of people that spend at least half their time in the building. How many of this population are on the first floor?

**120**\_\_Total                      **50**\_\_First Floor Only

None - Indicate if the building has personnel with identified special needs - sight, hearing, mobility impairments; special medical needs; permanent or temporary; etc.

Describe aspects or situations which bring increased numbers of people to the building. Meetings in auditorium facilities, sporting or cultural events, open house, social occasions, etc.

Seminars can add another **30**

Conferences can add another **100**

8. How large is the building? Describe structural characteristics of building. How many floors above grade? How many basements? Are there tunnels connecting this building to others? Identify the buildings connected by any tunnels. Are there vaults in the building that require special security considerations? Attach a "foot print" drawing to the hazard survey.

2 # of floors above grade (and fan loft)

1 # of basements

Yes tunnel to building 222

No vaults

No high bays

What is the total square footage? 105,000 sq-ft

9. List by room number all radiological controlled areas in your building.

**X-ray labs are located in D104, D126, A226, A234, D226**

10. List by room number locations of sealed sources in the building.

**none**

11. Hazardous Materials

The Chemical Management System serves as the primary indicator of chemicals within the building. This information is only a “snapshot” and may vary.

**Building 223 has no special chemical or radioactive hazards. Chemical data can be accessed in the ANL chemical data-base.**

12. Workplace conditions

The following matrix lists equipment or conditions that may be in your building and would indicate the possibility of a potential workplace hazard. Check all that apply. Also consider if any biohazards are associated with your building.

Electrical	Kinetic Energy	Potential Energy	Radiation	Thermal	Other
electrical lines YES	vehicles/ fork lifts/ dollies	Pneumatics  YES	x-ray  YES	boilers	routine outdoors weather
high voltage YES	Fans YES	Hydraulics YES	Laser YES	Furnaces YES	power tools YES
Transformers  YES	belts/ gears YES	pressure tanks, cylinders, bottles YES	UV	welding/cutting	animals insects
diesel generator YES	Motors  YES	vacuum system YES	RF  YES	chemistry labs - bunsen burners, etc. YES	Asbestos  YES
Capacitors YES				Steam YES	herbicides/ pesticides
battery bank YES					

(Add to this matrix as necessary)

13. Do you have any of the following:

**No**     **Glove boxes or hot cells**

**Yes**    **Eye washes or emergency showers**

**Yes**    **Chemical storage cabinets**

**Yes**    **HEPA filters**

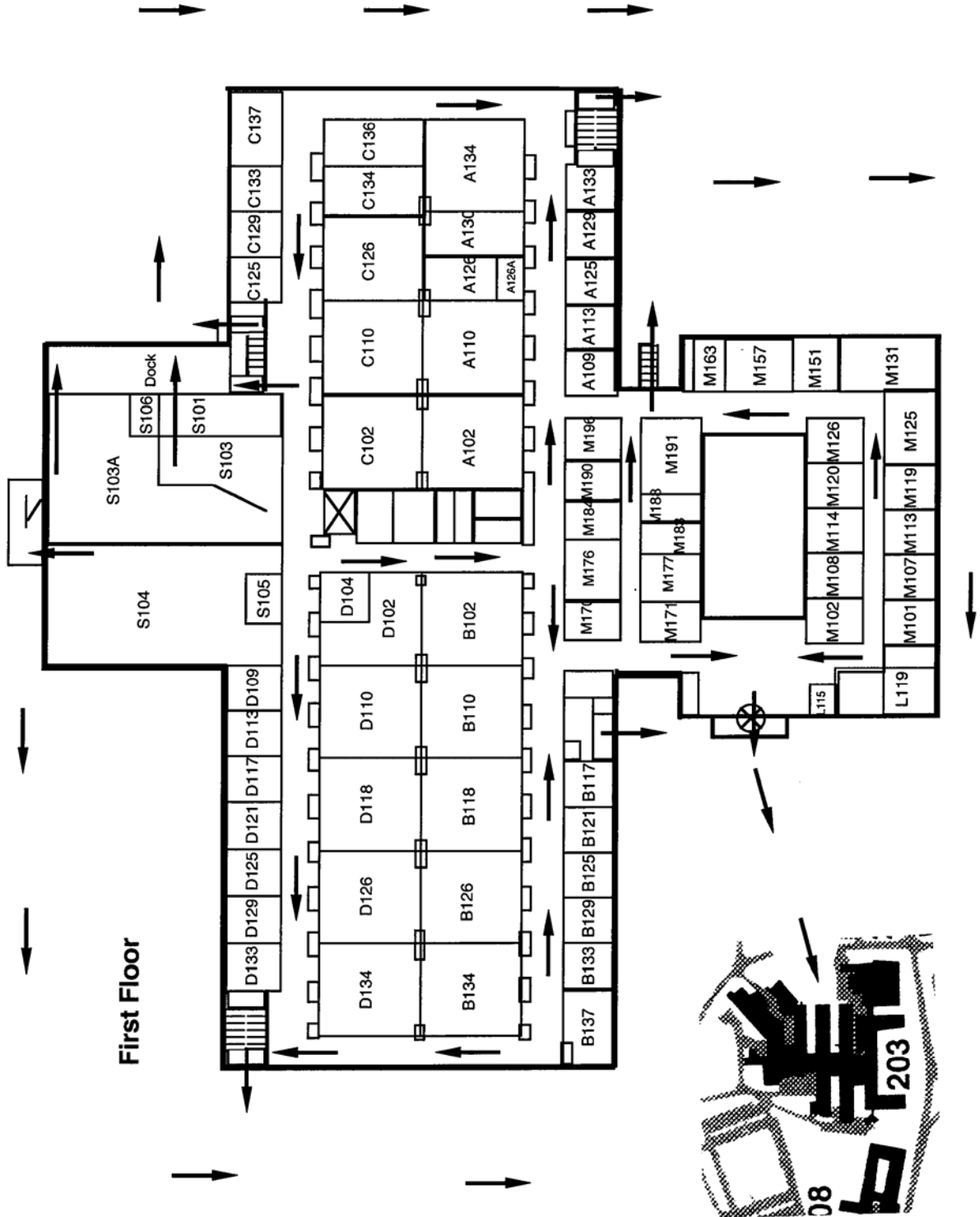
**No**     **Air monitoring systems**

14. List types of personnel protective equipment used in the building

eye wear, gloves, dosimeters

## **Appendix B**

**Building drawings with shelter and assembly areas and occupant vectors follow.**



## Second Floor

